

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-247706

(43)Date of publication of application : 14.09.1998

(51)Int.Cl.

H01L 23/32  
H01L 23/12  
H01L 23/13  
H01L 23/36  
H01L 23/40

(21)Application number : 09-069156

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ELECTRO DEVICE:KK

(22)Date of filing : 05.03.1997

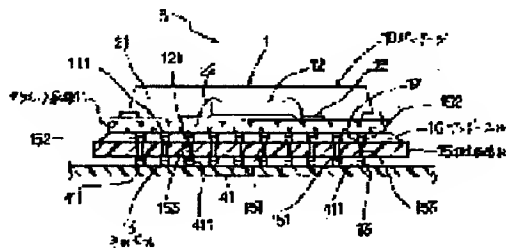
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## (54) BALL GRID ARRAY PACKAGE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce the thermal stress between an electronic part and a printed substrate, by a method wherein a resin substrate junctioned with solder balls is provided on the bottom face of a ceramic substrate for mounting element for interposing an under fill having the thermal expansion coefficient in the intermediate value between the ceramic substrate and the resin substrate between both ceramic and resin substrates.

**SOLUTION:** A BAG package 10 is provided with a ceramic substrate 11, an epoxy resin substrate 15 with solder balls 13 for outer connection and viaholes 153 on the bottom face thereof, an under fill 16 made of an epoxy resin filled up between the bottom face of the ceramic substrate 11 and the top face of the resin substrate 15, as well as solder parts 17 electrically connecting the ceramic substrate 11 to the resin substrate 15. On the other hand, the thermal expansion coefficient of the under fill 16 is set up in the intermediate value between those of the ceramic substrate 11 and the resin substrate 15. Through these procedures, the thermal stress between the bottom part of an electronic part 1 and a printed wiring board 41 can be reduced, thereby enabling the electronic part 1 using the package 10 in larger area to be mounted on a resin-made printed board 41.



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[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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